Standard values for lighting of indoor and outdoor workplaces and sports facility lighting Em

Traffic zones and general areas inside buildings

Traffic zones	
• Circulation areas and corridors	100
• Stairs, escalators, travolators	150
• Loading ramps/bays	150
Rest, sanitation and first aid rooms	
• Canteens, pantries	200
• Rest rooms	100
• Rooms for physical exercise	300
• Cloakrooms, washrooms, bathrooms, toilets	200
• Sick bay	500
• Rooms for medical attention	500
Control rooms	
• Plant rooms, switch gear rooms	200
• Telex, post room, switchboard	500
Store rooms, cold stores	
• Store and stockrooms	100
• Dispatch packing handling areas	300
Storage rack areas	
• Gangways: unmanned	20
• Gangways: manned	150
• Control stations	150

Industrial activities and crafts

Type of interior, task or activity	$\bar{E}_m$
Agriculture	
• Loading and operating of goods, handling equipment and machinery	200
• Buildings for livestock	50
• Sick animal pens; calving stalls	200
• Feed preparation; dairy; utensil washing	200
Bakeries	
• Preparation and baking	300
• Finishing, glazing, decorating	500
Cement, cement goods, concrete, bricks	
• Drying	50
• Preparation of materials; work on kilns and mixers	200
• General machine work	300
• Rough forms	300
Ceramics, tiles, glass, glassware	
• Drying	50
• Preparation, general machine work	300
• Enamelling, rolling, pressing, shaping simple parts, glazing, glass blowing	300
• Grinding, engraving, glass polishing, shaping precision parts, manufacture of glass instruments	750
• Grinding of optical glass, crystal, hand grinding and engraving	750
• Precision work e.g. decorative grinding, hand painting	1000
• Manufacture of synthetic precious stones	1500
Chemical, plastics and rubber industry	
• Remote-operated processing installations	50
• Processing installations with limited manual intervention	150
• Constantly manned work places in processing installations	300
• Precision measuring rooms, laboratories	500
• Pharmaceutical production	500
• Tyre production	500
• Colour inspection	1000
• Cutting, finishing, inspection	750

Electrical industry	
• Cable and wire manufacture	300
• Winding:	
– large coils	300
– medium-sized coils	500
– small coils	750
• Coil impregnating	300
• Galvanising	300
• Assembly work:	
– rough e.g. large transformers	300
– medium e.g. switchboards	500
– fine e.g. telephones	750
– precision e.g. measuring equipment	1000
• Electronic workshops, testing, adjusting	1500

Type of interior, task or activity	$\bar{E}_m$
• Laboratories	500
• Colour inspection	1000
Foundries and metal casting	
• Man-size underfloor tunnels, cellars, etc.	50
• Platforms	100
• Sand preparation	200
• Dressing room	200
• Work places at cupola and mixer	200
• Casting bay	200
• Shake out areas	200
• Machine moulding	200
• Hand and core moulding	300
• Die casting	300
• Model building	500

Metal working and processing	
• Open die forging	200
• Drop forging	300
• Welding	300
• Rough and average machining: tolerances ≥ 0.1 mm	300
• Precision machining; grinding: tolerances < 0.1 mm	500
• Scribing; inspection	750
• Wire and pipe drawing shops; cold forming	300
• Plate machining: thickness ≥ 5 mm	200

Food stuffs and luxury food industry	
• Work places and zones in – breweries, malting floor – for washing, barrel filling, cleaning, sieving, peeling – cooking in preserve and chocolate factories – work places and zones in sugar factories – for drying and fermenting raw tobacco, fermentation cellar	200
• Sorting and washing of products, milling, mixing, packing	300
• Work places and critical zones in slaughter houses, butchers, dairies mills, on filtering floor in sugar refineries	500
• Cutting and sorting of fruit and vegetables	300
• Manufacture of delicatessen foods, kitchen work, manufacture of cigars and cigarettes	500
• Inspection of glasses and bottles, product control, trimming, sorting, decoration	500

Hairdressers	
• Hairdressing	500
Jewellery manufacturing	
• Working with precious stones	1500
• Manufacture of jewellery	1000
• Watch making (manual)	1500
• Watch making (automatic)	500
Laundries and dry cleaning	
• Goods in, marking and sorting	300
• Washing and dry cleaning	300
• Ironing, pressing	300
• Inspection and repairs	750
Leather and leather goods	
• Work on vats, barrels, pits	200
• Fleshing, skiving, rubbing, tumbling of skins	300
• Saddlery work, shoe manufacture: stitching, sewing, polishing, shaping, cutting, punching	500
• Sorting	500
• Leather dyeing (machine)	500
• Quality control	1000
• Colour inspection	1000
• Shoe making	500
• Glove making	500
Printers	
• Cutting, gilding, embossing, block engraving, work on stones and platens, printing machines, matrix making	500
• Paper sorting and hand printing	500
• Type setting, retouching, lithography	1000
• Colour inspection in multicoloured printing	1500
• Steel and copper engraving	2000
Rolling mills, iron and steel works	
• Production plants without manual operation	50
• Production plants with occasional manual operation	150
• Production plants with continuous manual operation	200
• Slab Store	50
• Furnaces	200
• Mill train; coiler; shear line	300
• Control platforms; control panels	300
• Test, measurement and inspection	500

Paper and paper goods	
• Edge runners, pulp mills	200
• Paper manufacture and processing, paper and corrugating machines, cardboard manufacture	300
• Standard bookbinding work, e.g. folding, sorting, gluing, cutting, embossing, sewing	500
Power stations	
• Fuel supply plant	50
• Boiler house	100
• Machine halls	200
• Side rooms, e.g. pump rooms, condenser rooms etc.; switchboards (inside buildings)	200
• Control rooms	500
• Outdoor switch gear	20

Places of public assembly

General areas	
• Entrance halls	100
• Cloakrooms	200
• Lounges	200
• Ticket offices	300
Restaurants and hotels	
• Reception/cashier desk, porters desk	300
• Kitchen	500
• Restaurant, dining room, function room	–
• Self-service restaurant	200
• Buffet	300
• Conference rooms	500
• Corridors	100
Theatres, concert halls, cinemas	
• Practice rooms, dressing rooms	300
Trade fairs, exhibition halls	
• General lighting	300

Vehicle construction	
• Body work and assembly	500
• Painting, spraying chamber, polishing chamber	750
• Painting: touch-up, inspection	1000
• Upholstery manufacture (manned)	1000
• Final inspection	1000
Wood working and processing	
• Automatic processing e.g. drying, plywood manufacturing	50
• Steam pits	150
• Saw frame	300
• Work at joiner's bench, gluing, assembly	300
• Polishing, painting, fancy joinery	750
• Work on wood working machines e.g. turning, fluting, dressing, rebating, grooving, cutting, sawing, sinking	500
• Selection of veneer woods	750
• Marquetry, inlay work	750
• Quality control, inspection	1000

Museums	
• Exhibits, insensitive to light	
• Light sensitive exhibits	
Libraries	
• Bookshelves	200
• Reading area	500
• Counters	500
Public car parks (indoor)	
• In/out ramps (during the day)	300
• In/out ramps (at night)	75
• Traffic lanes	75
• Parking areas	75
• Ticket office	300

• Practical rooms and laboratories	500
• Handicraft rooms	500
• Teaching workshop	500
• Music practice rooms	300
• Computer practice rooms (menu driven)	300
• Language laboratory	300
• Preparation rooms and workshops	500
• Entrance halls	200
• Circulation areas, corridors	100
• Stairs	150
• Student common rooms and assembly halls	200
• Teachers rooms	300
• Library: bookshelves	200
• Library: reading areas	500
• Stock rooms for teaching materials	100
• Sports halls, gymnasiums, swimming pools (general use)	300
• School canteens	200
• Kitchen	500

Educational premises

Nursery school, play school

• Play room	300
• Nursery	300
• Handicraft room	300

Educational buildings

• Classrooms, tutorial rooms	300
• Classroom for evening classes and adults education	500
• Lecture hall	500
• Black board	500
• Demonstration table	500
• Art rooms	500
• Art rooms in art schools	750
• Technical drawing rooms	750

Health care premises

Rooms for general use	
• Waiting rooms	200
• Corridors: during the day	200
• Corridors: during the night	50
• Day rooms	200
Staff rooms	
• Staff office	500
• Staff rooms	300
Wards, maternity wards	
• General lighting	100
• Reading lighting	300
• Simple examinations	300
• Examination and treatment	1000
• Night lighting, observation lighting	5
• Bathrooms and toilets for patients	200
Examination rooms (general)	
• General lighting	500
• Examination and treatment	1000
Eye examination rooms	
• General lighting	300
• Examination of the outer eye	1000
• Reading and colour vision tests with vision charts	500
Ear examination rooms	
• General lighting	300
• Ear examination	1000
Operating areas	
• Pre-op and recovery rooms	500
• Operating theatre	1000
• Operating cavity	
Intensive care unit	
• General lighting	100
• Simple examinations	300
• Examination and treatment	1000
• Night watch	20
Dentists	
• General lighting	500
• At the patient	1000
• Operating cavity	5000
• White teeth matching	5000
Laboratories and pharmacies	

Scanner rooms	
• General lighting	300
• Scanners with image enhancers and television systems	50
Delivery rooms	
• General lighting	300
• Examination and treatment	1000
Treatment rooms (general)	
• Dialysis	500
• Dermatology	500
• Endoscopy rooms	300
• Plaster rooms	500
• Medical baths	300
• Massage and radiotherapy	300

• Air traffic control tower	500
• Testing and repair hangars	500
• Engine test areas	500
• Measuring areas in hangars	500